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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 09/349,198
Filing Date: July 07, 1999
Appellant(s): PARKER, CHRISTOPHER F.

Chad D. Terrell, Reg. No. 52,279
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 2/11/08 appealing from the Office action
mailed 07/11/07.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

5,721,915	SOCKUT	2-1998
5,517,641	BARRY ET AL	5-1996

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-4 and 12-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over (US 5,721,915) Sockut et al, hereafter Sockut in view of (US 5,517,641) Barry et al, hereinafter Barry.

With respect to claim 1, Sockut teaches, a database table recovery system operable to: (col. 1, lines 20-33 and col. 9, lines 19-22) retrieve a backup copy of a tablespace; apply updates to the backup copy from a log associated with a database table; and to restore the database table associated with the tablespace from the updated backup copy without recovering the tablespace (col. 2, lines 4-11, col. 3, lines 61-67, and col. 4, lines 1-17).

Sockut fails to teach, a tablespace access system coupled to the table recovery system, the tablespace access system is operable to restrict access to the tablespace to read-only access. Barry teaches, a tablespace access system coupled to the table recovery system, the tablespace access system is operable to restrict access to the tablespace to read-only access (col. 2, lines 65-67 and col. 3, lines 1-12 and lines 34-40). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have a tablespace access system coupled to the table recovery system, the tablespace access system is operable to restrict access to the tablespace to read-only access and in view of Sockut's teachings in col. 8, lines 57-67, col. 9, lines 1-18 and lines 37-44 of database performance and to modify in Sockut because such a modification would allow Sockut's system to have independent recovery of the data and indexes and a significant decrease in elapsed time since the log file updates are done for all objects in the database through the log file.

With respect to claim 2, Sockut teaches. the table recovery system further comprises a log record sorter system operable to sort log records from the log (col. 7, lines 25-36).

With respect to claim 3, Sockut teaches, a data page updater system coupled to the log record sorter system operable to apply log record updates to the backup copy (col. 7, lines 37-62).

With respect to claim 4, Sockut teaches, a data page scanner system coupled to the data page updater system, the data page scanner system operable to locate records associated with the database table in at least one data page (col. 11, lines 41-67 and col. 12, lines 1-11).

With respect to claim 12, Sockut teaches, receiving a backup copy of the tablespace having one or more database tables (col. 9, lines 19-32), reading log records associated with a first database table in the one or more database tables (col. 4, lines 5-11), applying the log records to the backup copy without modifying the configuration of the tablespace (col. 4, lines 22-29), building new table data pages from the backup copy (col. 14, lines 66-67), scanning the new table data pages for records of the first database table (col. 11, lines 52-66), and updating the first database table from the records (col. 14, lines 12-22). Sockut failed to teach, reading log records associated with a first database table in the one or more database tables, but it would have been obvious to one having ordinary skill in the art at the time the invention was made to read log records associated with a first table in the one or more tables and to modify in Sockut because such a modification would allow the data to be read and updated in the first table before it is copied to the new table/tables and a backup copy is made of the data pages.

With respect to claim 13, Sockut failed to teach, limiting access of the second table to the tablespace to read-only before the first table is updated and the second table depends on the tablespace. Barry teaches, limiting access of the second table to the tablespace to read-only before the first table is updated and the second table depends on the tablespace (col. 5, lines 12-31). It would have been obvious to one having ordinary skill in the art at the time the invention was made to limit access of the second table to the tablespace to read-only before the first table is updated and the second table depends on the tablespace and to modify in Sockut because such a modification would allow Sockut to have the capability of retrieving the tablespace but not being able to change it prior to the first table being updated. It is well known in the art that a read-only document can be displayed or printed but not altered in any way; read-only memory (ROM) holds programs that cannot be changed.

With respect to claim 14, Sockut failed to teach, providing update access to the second table after the first table is updated. Barry teaches, providing update access to the second table after the first table is updated (col. 4, lines 19-61). It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide update access to the second table after the first table is updated and to modify in Sockut because such a modification would allow the second table to be updated in successive order since the first table is first to receive the update with the second table following which is in chronological order. Relational database management systems usually work with two data tables at the same time, relating the information or data through links established by a common column or field. A tablespace stores one or more tables containing file pages.

With respect to claim 15, Sockut teaches, sorting the log records (col. 12, lines 51-65).

With respect to claim 16, Sockut teaches, deleting the rows (col. 9, lines 64-67). Sockut failed to teach, locking the indices. Barry teaches, locking the indices (col. 7, lines 10-31). It would have been obvious to one having ordinary skill in the art at the time the invention was made to lock the indices and to modify in Sockut because such a modification would eliminate the space needed for the indices and the time needed for accessing the indices.

With respect to claim 17, Sockut teaches, building one or more table data pages from the backup copy having the log records applied (col. 3, line 61-67 and col. 4, lines 1-30); selecting one or more records from the one or more database table data pages, the one or more records belonging to the first database table (col. 5, lines 56-67 and col. 6, lines 1-34); updating the first database table with the one or more records selected from the one or more table data pages while allowing access to the rest of the one or more database tables in the tablespace (col. 6, lines 35-50); and wherein the first database table can be recovered without having to recover the tablespace entirely (col. 7, lines 13-56).

This independent claim is rejected for the similar rationale given for claim 12.

With respect to claim 18, Socket teaches, allowing at least one or more tables to have update access to the tablespace when the first table is restored (col. 12, lines 18-25).

With respect to claim 19, Socket teaches, deleting all of the rows of the first database table (col. 9, lines 64-67). Sockut fails to teach, locking out access to indices in the first database table. Barry teaches, locking out access to indices in the first database table (col. 7, lines 52-67 and col. 8, lines 1-4). It would have been obvious to one having ordinary skill in the art at the time the invention was made to lock out access to indices in the first database table and to modify in Sockut because such a

modification would eliminate the space needed for the indices (index) and the time needed for accessing the indices (index).

With respect to claim 20, Socket teaches, reading the log records from the log record file to a log record workspace (col. 4, lines 5-11), sorting the log records (col. 4, lines 11-17), and applying the log records to the tablespace backup copy (col. 4, lines 22-29 and col. 9, lines 19-22).

Allowable Subject Matter

Claims 5 and 6 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: Applicant's page row extractor system coupled to the data page scanner system and operable to extract page rows from at least one data page that has been located by the data page scanner system in claim 5 and in claim 6 "a page row extractor system coupled to the data page scanner system and operable to extract the page rows from at least one data page that has been located by the data page scanner system" and "the table row inserter system coupled to the page row extractor system operable to write extracted page rows to the database table", was not disclosed, made obvious or fairly suggested by the prior art of record.

(10) Response to Argument

Argument no. 1 : Appellant Argues on page 14, paragraph II. Legal Standard for Obviousness as follows: Even if all elements of a claim are disclosed in various prior art references, which is certainly not the case here, the claimed invention taken as a whole still cannot be said to be obvious without some reason why one of ordinary skill

at the time of the invention would have been prompted to modify the teachings of a reference or combine the teachings of multiple references to arrive at the claimed invention and the controlling case law, rules, and guidelines repeatedly warn against using Applicant's disclosure as a blueprint to reconstruct the claimed invention. For example, the MPEP states, "The tendency to resort to 'hindsight' based upon Applicant's disclosure is often difficult to avoid due to the very nature of the examination process. Impermissible hindsight must be avoided and the legal conclusion must be reached on the basis of the facts gleaned from the prior art." MPEP 2142.

Examiner's Response: The Examiner did not take any portion of the motivational statements from Appellant's disclosure. Therefore, impermissible hindsight does not exist in the reasons for obviousness. This argument is considered moot.

Argument no. 2: Appellant Argues on page 15, III, A. The Sockut-Barry combination fails to disclose, teach, or suggest each and every limitation recited in claim 1: At a minimum, the proposed Sockut—Barry combination fails to disclose, teach, or suggest the database table recovery system recited in claim 1 that is operable to:

“apply updates to the [retrieved] backup copy [of the tablespace] from a log associated with a database table; and restore the database table associated with the tablespace from the updated backup copy without recovering the tablespace” and nowhere does this series of steps appear to be disclosed, taught, or suggested.

Examiner's Response: The claim limitation of claim 1 recites “A system for recovering a database table comprising: a database table recovery system operable to: retrieve a

backup copy of a tablespace; apply updates to the backup copy from a log associated with a database table; and restore the database table associated with the tablespace from the updated copy without recovering the tablespace; and a tablespace access system coupled to the database table recovery system, wherein the tablespace access system is operable to restrict access to the tablespace to read-only access". Socket teaches, a database table recovery system operable to perform the claim limitations of claim 1 in col. 1, lines 20-33 ("Any database management system (DBMS) will require some type of reorganization and one type of reorganization involves restoration of clustering and removal of overflows. Reorganization may restore performance") and col. 9, lines 19-22 ("At step 516, a backup copy of the new tablespace or partition (as a basis of recoverability) is created. Read/write access to the new area of the table space or partition is started") and to retrieve a backup copy of a tablespace and apply updates to the backup copy from a log associated with a database table and restore the database table associated with the tablespace from the updated backup copy without recovering the tablespace in col. 2, lines 4-11, col. 3, line 61-col. 4, line 17 ("As RBA is sometimes called a log sequence number (LSN). A log consists of a sequence of entries in a file (a region of storage), recording the changes that occur to a database. Then the reorganization copies data from an old (original) area for the table space to a new area for the table space. Concurrently, users can use the DBMS's normal facilities to read and write the old area and the DBMS uses its normal facilities to record the writing in a log" and in col. 3, lines 64-65 ("The data is copied from an old area in the table space to a new area in the table space") and in col. 3, lines 6-8 ("reads the log that has been written to and applies the log to the new area to bring the new area up to date"). Barry teaches, a tablespace access system coupled to the table recovery system, the table space access system is operable to restrict access to the tablespace

to read-only access in col. 2, line 65-col. 3, line 12 and lines 34-40 ("Briefly, the process is started by flushing any pending operations and setting all of the fields in the tablespace to read only status"). It is interpreted that the reorganization process is analogous to the recovering of the database ... tablespace from the backup copy without recovering the tablespace. Appellant states "Appellant assumes the Examiner is equating this disclosure in Sockut with the backup tablespace recited in claim 1. Appellant will assume for the sake of argument only (and not by way of concession or agreement) that the Examiner's proposed equation is possible."

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have a tablespace access system coupled to the table recovery system, the tablespace access system is operable to restrict access to the tablespace to read-only access and in view of Sockut's teachings in col. 8, lines 57-67, col. 9, lines 1-18 and lines 37-44 of database performance and to modify in Sockut because such a modification would allow Sockut's system to have independent recovery of the data and indexes and a significant decrease in elapsed time since the log file updates are done for all objects in the database through the log file.

One of ordinary skill in the art would have been capable of applying this known technique to a known device (method or product) that was ready for improvement and the results would have been predictable to one of ordinary skill in the art.

Argument no. 3: Appellant argues on page 18, footnote 1 at the bottom of the page: The Examiner's statement that "the Applicant's are not reciting all of the claim limitations of claim 1 in the arguments" is not understood by Appellant. (Final Office Action at 9(Appellant is not obligated to recite each and every limitation in a claim when arguing the patentability of the claim. Respectfully, it is the Examiner's burden to show

that one or more references disclose, teach, or suggest each and every limitation in Appellant's claim. "To establish prima facie obviousness of a claimed invention, all of the claim limitations must be taught or suggested by the prior art." MPEP, 2143.03; see also in re Royka, 490 F.2d 981, 180 USPQ 580 (C.C.P.A. 1974).

Examiner's Response: In response to Appellant's argument, the Office Action fails to provide motivation is not persuasive because a suggestion/ motivation need not be expressly stated in one or all of the references used to show obviousness. Cable Electric Products, Inc. v. Genmark, Inc., 770 F.2d 1015, 1025, 226 USPQ 881, 886 (Fed. Cir. 1985); In re Sheckler, 438 F.2d 999, 1001, 168 USPQ 716, 717 (CCPA 1971). It is assumed that which is taught in the reference relies to some extent on the knowledge of persons skilled in the art to complement that which is known and the skilled artisan is presumed to know something more about the art than only what is disclosed in the applied reference. Further, the skilled artisan is presumed to know something more about the art than only what is disclosed in the applied reference/references. In other words, the person having ordinary skill in the art has a level of knowledge apart from the content of the references. In re Bode, 550 F.2d 656, 660, 193 USPQ 12, 16 (CCPA 1977); In re Jacoby, 309 F.2d 513, 516, 135 USPQ 317, 319 (CCPA 1962). A conclusion of obviousness is established "from common knowledge and common sense of the person of ordinary skill in the art without any specific hint or suggestion in a particular reference." In re Bozek, 416 F.2d 1385, 1390, 163 USPQ 545, 549 (CCPA 1969). Sources of Rationale Supporting a Rejection under 35 U.S.C. 103: Rationale may be in a reference, or reasoned from common knowledge

in the art, scientific principles, art- recognized equivalents, or legal precedent. See MPEP 2144.

Argument no. 4, Appellant argues on pages 21 and 22: the cited portions of Barry do not disclose, teach, or suggest “a tablespace access system coupled to the table recovery system, wherein the tablespace access system is operable to restrict access to the tablespace to read-only access and the Examiner has not provided the requisite teaching, suggestion, or motivation either in the knowledge generally available to one of ordinary skill in the art at the time of Appellant’s’ invention to combine these references in the manner the Examiner proposes. Appellant respectfully submits that the Examiner’s attempt to combine Sockut with Barry to constitute the type of impermissible hindsight reconstruction of Appellant’s claims as a blueprint, that is specifically prohibited by the MPEP and governing Federal Circuit cases.

Examiner’s response: As stated above in the response to Appellant’s argument no. 1, the Examiner has not used Appellant’s claims as a blueprint and constituted impermissible hindsight reconstruction. This argument is considered moot on these stated grounds. It is interpreted that Barry discloses claim limitations argued in col. 2, line 65-col. 3, line 12 and lines 34-40 above. As for the motivation to combine Sockut and Barry, both are in the same field of endeavor. Both references disclose a tablespace and the reorganization and recovery of a database table.

Also, in response to Appellant’s argument that the Examiner’s conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon

hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

The support for the teachings and evidence is considered to be provided in the references taken and read as a whole and not simply the columns and lines cited by the Examiner and the motivational statements are disclosed in the rejection above.

Conclusion: Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

The Examiner carefully drew up a correspondence of each of Appellant's (Applicant's) claimed limitations, one or more referenced passages in Sockut and Barry what is well known in the art and what is obvious to one having ordinary skill in the art at the time the invention was made.

The Examiner is entitled to give limitations their broadest reasonable interpretation in light of the Specification (see below):

2111 Claim Interpretation; Broadest Reasonable Interpretation [R-1]

>CLAIMS MUST BE GIVEN THEIR BROADEST REASONABLE INTERPRETATION

During patent examination, the pending claims must be "given the broadest reasonable interpretation consistent with the specification." Applicant always has the opportunity to amend the claims during prosecution and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. In re Prater, 162 USPQ 541,550-51 (CCPA 1969).<

Art Unit: 3600

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Ella Colbert/

Primary Examiner

Art Unit 3696

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May 7, 2008